

REVISED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 October 2004 (21.10.2004)

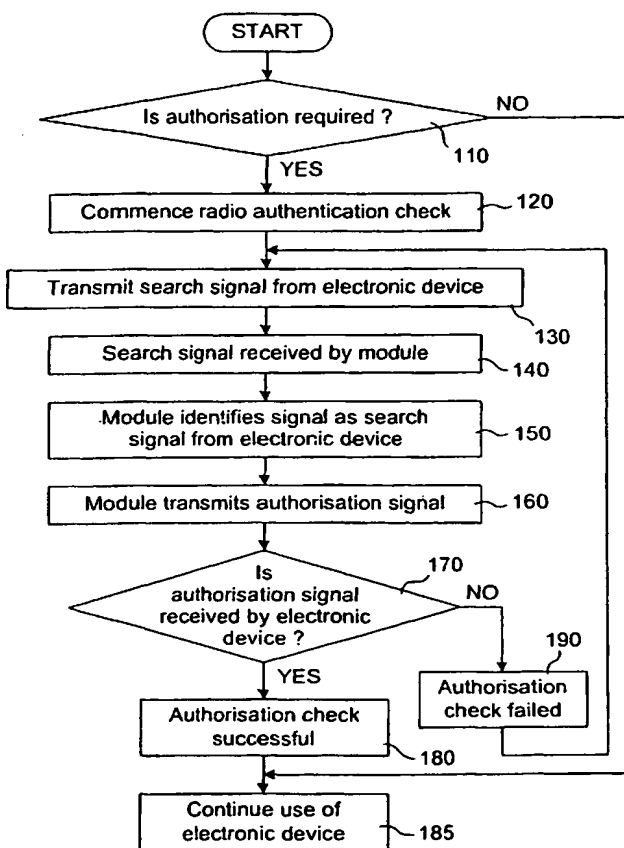
PCT

(10) International Publication Number
WO 2004/090781 A1

- (51) International Patent Classification⁷: **G06F 1/00**,
H04M 1/725
- (21) International Application Number:
PCT/JP2004/004582
- (22) International Filing Date: 31 March 2004 (31.03.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0307628.8 2 April 2003 (02.04.2003) GB
- (71) Applicant (for all designated States except US): NEC
CORPORATION [JP/JP]; 7-1, Shiba 5-chome, Mi-
nato-ku, Tokyo 1088001 (JP).
- (72) Inventor; and
(75) Inventor/Applicant (for US only): **PARKER, John**
[GB/GB]; c/o NEC Technologies (UK) Ltd., Level 3, The
Imperium, Imperial Way, Reading, Berkshire RG20TD
(GB).
- (74) Agents: **MIYAZAKI, Teruo** et al.; 8th Floor, 16th Kowa
Bldg., 9-20, Akasaka 1-chome, Minato-ku, Tokyo 1070052
(JP).
- (81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: APPARATUS FOR AUTHORISING ACCESS TO AN ELECTRONIC DEVICE



(57) Abstract: Commonly used mobile devices provide authenticated access to the device through the manual entry of personal identification numbers (PINs). Third generation devices will potentially contain a large amount of user sensitive data and there is a need for increased security on the devices to prevent unauthorised access. However, increasing the number of manually entered PINs or passwords is inconvenient to the user. These problems are overcome providing authorisation to access the electronic device via a series of radio signals between the electronic device and a radio module which is paired to the device. The module is carried separately from the device and, when authorisation is required, the device automatically attempts to detect the presence of the radio module. In order to detect the presence of the module, the device transmits a search signal to the module (130). The radio module receives (140) the search signal from the device and transmits an authorisation signal in response (160). On receiving (170) the authorisation signal the electronic device provides the user with access to the restricted application (185). If the electronic device does not receive an authorisation signal from the module, access to the electronic device is initially refused and the user may be required to provide further authorisation, for example using a PIN, in order to access the restricted application.

WO 2004/090781 A1



TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

Published:

— with international search report

- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GII, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

- (88) Date of publication of the revised international search report: 20 January 2005

(15) Information about Correction:

see PCT Gazette No. 03/2005 of 20 January 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G06F1/00 H04M1/725		International Application No PCT/JP2004/004582
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 G06F H04M		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EP0-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 515 575 B1 (KATAOKA KENJI) 4 February 2003 (2003-02-04) column 3, line 18 - column 4, line 17 column 4, line 45 - column 6, line 41 column 7, line 16 - line 62 figures 2-5	1-31
X	US 6 070 240 A (XYDIS THOMAS G) 30 May 2000 (2000-05-30) column 2, line 23 - line 48; figures 2-5 column 3, line 18 - column 4, line 10 column 4, line 45 - column 5, line 28 figures 2-5	1-31
----- -/--		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&" document member of the same patent family</p> </div> </div>		
Date of the actual completion of the international search <div style="text-align: center; font-size: 1.2em;">1 October 2004</div>		Date of mailing of the international search report <div style="text-align: center; font-size: 1.2em;">07. 10. 04</div>
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer <div style="text-align: center; font-size: 1.2em;">Straniero, R</div>

INTERNATIONAL SEARCH REPORT

International Application No
PCT/JP2004/004582

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>EP 1 291 748 A (CIT ALCATEL) 12 March 2003 (2003-03-12)</p> <p>paragraphs [0006], [0008] - [0011] paragraphs [0041], [0043] figure 2</p>	<p>1,4-7, 13-16, 19-21, 28-31</p>
A	<p>EP 1 089 157 A (SWATCH AG) 4 April 2001 (2001-04-04)</p> <p>paragraphs [0041] - [0043] paragraph [0047]</p>	<p>1,8,14, 16,22, 28-31</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/004582

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6515575	B1	04-02-2003	JP 2000003336 A GB 2341061 A ,B	07-01-2000 01-03-2000
US 6070240	A	30-05-2000	AU 9207798 A CA 2296461 A1 CN 1126322 B EP 0993716 A1 JP 2001514424 T WO 9911022 A1	16-03-1999 04-03-1999 29-10-2003 19-04-2000 11-09-2001 04-03-1999
EP 1291748	A	12-03-2003	US 2003048174 A1 EP 1291748 A2	13-03-2003 12-03-2003
EP 1089157	A	04-04-2001	EP 1089157 A1	04-04-2001